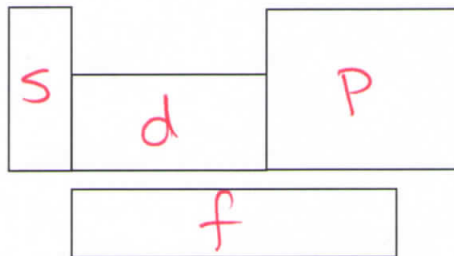
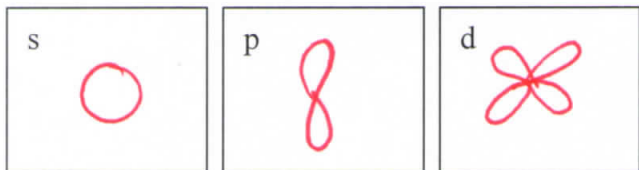


PrelB: **Electron Configuration Practice #1**

Name: \_\_\_\_\_

Label the s,p,d,f sections of the periodic table:

Sketch the sublevels:



Continue writing in the electron configuration pattern in the following blanks:

$1s^2, 2s^2, 2p^6, 3s^2, 3p^6, 4s^2, 3d^{10}, 4p^6, 5s^2, 4d^{10}, 5p^6, 6s^2$

Write the electron configuration:

Helium:  $1s^2$  Lithium:  $1s^2 2s^1$

Nitrogen:  $1s^2 2s^2 2p^3$  Silicon:  $1s^2 2s^2 2p^6 3s^2 3p^2$

Chlorine:  $1s^2 2s^2 2p^6 3s^2 3p^5$  Argon:  $1s^2 2s^2 2p^6 3s^2 3p^6$

Scandium:  $1s^2 2s^2 2p^6 3s^2 3p^6 4s^2 3d^1$

Germanium:  $1s^2 2s^2 2p^6 3s^2 3p^6 4s^2 3d^{10} 4p^2$

Write the noble gas configuration:

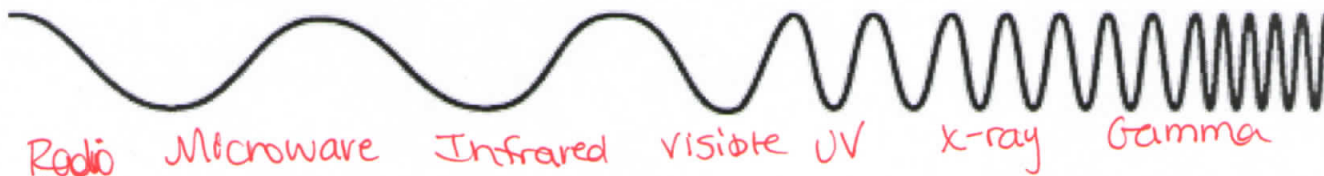
Phosphorus:  $[Ne] 3s^2 3p^3$  Manganese:  $[Ar] 4s^2 3d^5$

Selenium:  $[Ar] 4s^2 3d^{10} 4p^4$  Strontium:  $[Kr] 5s^2$

Silver:  $[Kr] 5s^2 4d^9$  Antimony:  $[Kr] 5s^2 4d^{10} 5p^3$

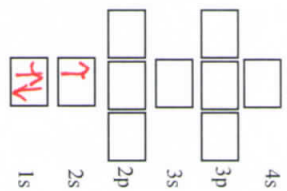
Summarize what the following scientists are known for:

- 1) Plank: energy is quantized ( $e^-$  is limited to certain energy levels + positions)
- 2) Heisenberg: uncertainty principle = position + velocity of electron cannot be known at the same time
- 3) What was wrong with Bohr's model of the atom? \_\_\_\_\_  
  - it put the electron in specific positions
  - we are not allowed to know that much info about the electron's location
- 4) What model of the atom do we use today? Quantum mechanical Model
- 5) How is our current model of the atom different from Bohr's model? \_\_\_\_\_  
it shows the probability of the electron's position  
(less exact than Bohr's model b/c of Heisenberg's uncertainty principle)
- 6) Draw the order of the electromagnetic spectrum from longest to shortest wavelength:

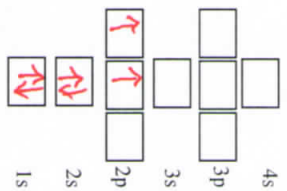


PreIB: Electron Configuration Practice #1

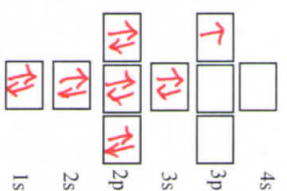
Name: \_\_\_\_\_



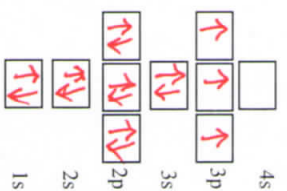
Li =  $1s^2 2s^1$



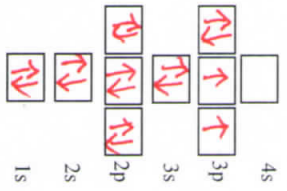
C =  $1s^2 2s^2 2p^2$



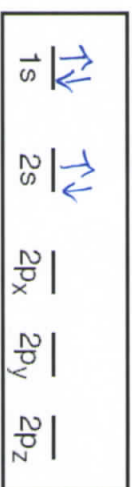
Al =  $1s^2 2s^2 2p^6 3s^2 3p^1$



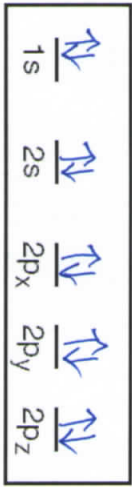
P =  $1s^2 2s^2 2p^6 3s^2 3p^3$



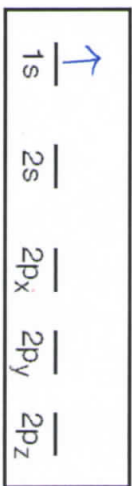
S =  $1s^2 2s^2 2p^6 3s^2 3p^4$



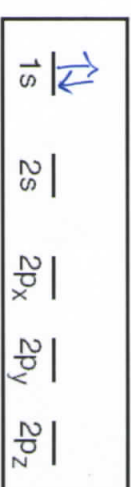
Be =  $1s^2 2s^2$



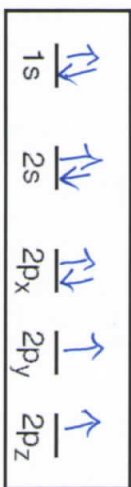
Ne =  $1s^2 2s^2 2p^6$



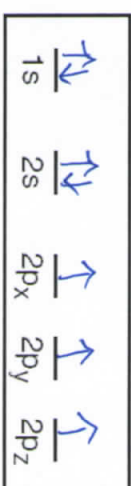
H =  $1s^1$



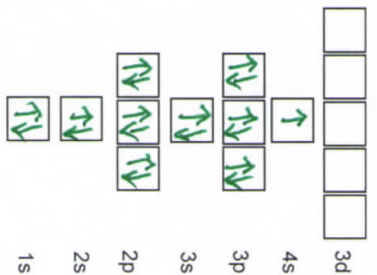
He =  $1s^2$



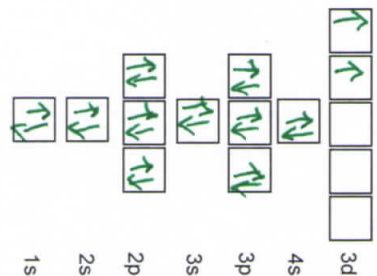
O =  $1s^2 2s^2 2p^4$



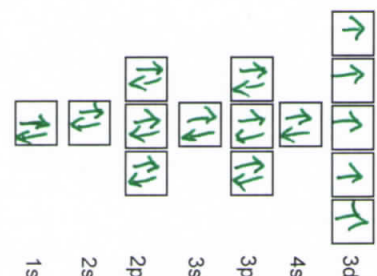
N =  $1s^2 2s^2 2p^3$



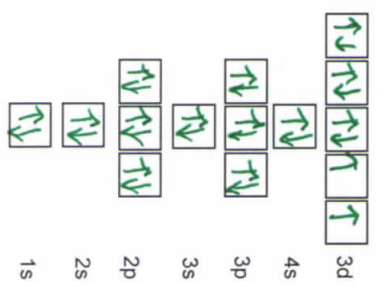
K =  $[Ar] 4s^1$



Ti =  $[Ar] 4s^2 3d^2$



Mn =  $[Ar] 4s^2 3d^5$



Ni =  $[Ar] 4s^2 3d^8$